

Plantae Chinenses Forrestianae.

Plants discovered and collected by George Forrest during his first exploration of Yunnan and Eastern Tibet in the years 1904, 1905, and 1906.

Description of New Species of Asclepiadaceae.

BY

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Periploca Forrestii, Schltr. Sp. nov.

Frutex volubilis, scandens, bene ramosa, usque ad 2 m. alta; ramis ramulisque filiformibus, glabris, teretibus; foliis lanceolatis, acuminatis, basi cuneatis, brevissime petiolatis, 4-6 cm. longis, infra medium 0.7-1.3 cm. latis, utrinque glabris, textura coriaceis; cymis axillaribus, abbreviatis, paucifloris; bracteis deltoideis, minutis; floribus in genere inter minores; calycis segmentis late ovatis vel suborbicularibus, obtusis, glabris, vix 1.5 mm. longis; corolla subrotata alte 5-partita c. 0.5 cm. longa, lobis oblongis oblique subapiculatis, glabris, intus per medium leviter carinatis; coronae segmentis 5, subulatis, minute puberulis, corollae lobis paululo brevioribus, basi utrinque squamella parvula auctis, corollae supra basin affixis; antheris e basi dilatata subunguiculata angustatis, obovatis, connectivo in apiculum satis longum, puberulum producto; polliniis elliptico-spathulatis, glandula semilunata parvula; stigmatibus capite breviter conico gibbis 5 medio circumdato.

"Semi-climbing shrub of 3-6 ft. Thickets on hills west of Yunnanfu. Elevation 8000 ft." G. Forrest. No. 572.

This species has evidently been always mistaken for *P. calophylla*, Falc. It is, however, well distinguished by the broader and glabrous corolla-segments and the corona-scales. The flowers, besides, are of much smaller size than in *P. calophylla*, Falc.

Cynanchum Forrestii, Schltr. Sp. nov.

Terrestre, erectum, simplex, usque ad 45 cm. altum; caule teretiusculo, basi glabrato, apicem versus puberulo, bene foliato; [Notes, R.B.G., Edin., No. XXXVI, March 1913.]

foliis brevissime petiolatis, late ellipticis, breviter acuminatis, basi rotundatis vel subcordatis, subtus puberulis, praesertim nervis, superne glabratiss, nervis exceptis, 3.5-6 cm. longis, medio fere 2.5-4.5 cm. latis; cymis pedunculatis, subumbelliformi-abbreviatis, usque ad 3.5 cm. longis, 10-15-floris; pedunculo puberulo usque ad 2 cm. longo; pedicellis gracilibus usque ad 1 cm. longis, puberulis; calycis segmentis lanceolato-triangularibus subacutis, puberulis, margine ciliatis, corolla duplo brevioribus; corolla subrotata, alte 5-partita, 3.75 mm. longa; lobis oblongis obtusis, intus medio puberulis; gynostemio humili, corolla duplo brevior; corona alte 5-lobata, lobis ovato-lanceolatis obtusiuscule acuminatis, glabris, intus basi medio gibbo parvulo donatis, gynostemio subaequilongis; antheris oblongo-quadratis, marginibus cartilagineis basi dilatatis, approximatis, appendice hyalino suborbiculari, obtuso, in stigmatibus caput apice incumbente; pollinibus oblique oblongoideis, translatoribus brevibus horizontalibus retinaculo oblongoideo, pollinibus submajore.

"Plant of 1-2 ft. Flowers greenish-orange. Dry, shady situations in pine forests on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 9000-10,500 ft. July 1906." G. Forrest. No. 4662.

Evidently No. 2241 from the Lichiang Range is a smaller form of this species. "Plant of 6-12 inches. Flowers greenish-orange. Amongst scrub and in dry, stony, open situations on the eastern flank of the Lichiang Range. Lat. 27° 20' N. Alt. 9000-10,000 ft. May 1906." G. Forrest. No. 2241.

The plant is allied to *C. Arnottianum*, Wight, but is easily distinguished by the longer peduncles and pedicels. I place it next to it.

var. **Balfourianum**, Schltr. Var. nov.

Differt a forma typica, floribus ut videtur purpurascens, calycis segmentis lanceolatis, acutis, coronae lobis basi subangustatis.

"Plant of 9-18 inches. Flowers dark greenish-brown. Dry, rocky situations in pine forests on the eastern flank of the Lichiang Range. Lat. 27° 20' N. Alt. 10,000-11,000 ft. May 1906." G. Forrest. No. 2216.

I regard this plant for the present as a variety of *C. Forrestii*, Schltr., although I do not think it unlikely that later on it may prove to be a good species. The material at hand consists only of a single plant which does not allow any conclusion as to its variability. As is proved by the above quoted No. 2241, it seems, however, that *C. Forrestii*, Schltr., may be a rather variable species, which generally can be recognised by the very shortly petioled leaves with pubescent nerves on the upper side.

Tylophora yunnanensis, Schltr. Sp. nov.

Erecta, simplex vel subsimplex, apice subscandens, usque ad 50 cm. alta; caule tereti, minute puberulo, bene foliato, apicem versus subfoliato; foliis brevissime petiolatis ellipticis, obtusis, vulgo cum apiculo minuto, basi cuneatis, superne glabratiss, subtus minute puberulis, 3-7.5 cm. longis, medio fere 1.2-3.2 cm. latis; cymis graciliter pedunculatis, laxe plurifloris, 3.5-5 cm. longis, pedunculo gracili, puberulo, usque ad 3.5 cm. longo; pedicellis filiformibus, puberulis 0.7-0.9 cm. longis; calycis laciniis lanceolato-triangularis, obtusiusculis, dorso sparsim pilosulis, margine sparsim ciliatis, 1.25 mm. longis; corolla rotata, alte 5-partita, 2.5-3 mm. longa, lobis oblongis, obtusis, margine minute ciliatis, extus glabris, intus tenuissime pilosulis; gynostemio humili, parvulo; coronae squamis dorso filamentorum omnino adnatis, gibbiformibus, triangularis, obtusis, basi truncatis, basin antherarum haud superantibus; antheris quadratis, appendice hyalino subreniformi, obtusissimo, apice in stigmatibus caput incumbente; pollinibus oblongoideis, horizontaliter patentibus, translatoribus perbrevis, retinaculo oblongoideo-quadrato, minuto, pollinibus fere 6-plo minoribus.

"Semi-scandent plant of 1-2 ft. Flowers livid greenish-crimson. Dry, rocky, open situation in pine forests on the foothills of the Lichiang Range. Lat. 27° N. Alt. 9000 ft. July 1906." G. Forrest. No. 2567.

"Plant of 1-2 ft. Flowers purplish-green: Amongst shrubs and grasses on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 8000-9000 ft. June-July 1906." G. Forrest. No. 4661.

The species is somewhat allied to the Himalayan *T. Govani*, Hook. f.

Ceropegia dolichophylla, Schltr. Sp. nov.

Terrestris, scandens, usque ad 1 m. et ultra; caule filiformi, tereti, glabrato, laxe foliato; foliis patentibus patulisve, lanceolatis vel lineari-lanceolatis, acuminatis, basi longe cuneatis, in petiolum breve sparsim puberulum angustatis, margine praesertim basi sparsim ciliatis, caeterum glabris, textura tenuibus 6-21 cm. longis, medio fere 0.8-1.8 cm. latis; cymis breviter pedunculatis, abbreviatis, pedunculo usque ad 1.7 cm. longo, sparsim puberulo vel subglabro; pedicellis glabratiss, usque ad 1.5 cm. longis, glabris, calycis laciniis lineari-lanceolatis, acuminatis, glabris, usque ad 0.6 cm. longis; corolla omnino c. 2.5 cm. longa, extus glabra, e basi subgloboso-inflata vulgo obliqua, in tubum subcylindricum producta, lobis oblongo-ligulatis, obtusis, apice cohaerentibus, intus carinatis et sparsim puberulis, c. 1.4 cm. longis, tubo fere aequilongis, corona poculi-

formi, foliolis altius connatis, in dentes 2 triangulos obtusos, pilosulos productis, ligulis interioribus linearibus obtusis fere duplo longioribus, glabris; polliniis oblique oblongoideis, translatoribus brevibus, retinaculo anguste oblongoideo, polliniis paulo minore.

"Scandent plant of 1-3 ft. Flowers deep purplish-maroon and green. Root fleshy, and eaten by the hill tribes. On grass and dwarf scrub in dry, stony places on the eastern flank of the Tali Range. Lat. 25° 40' N. Alt. 8000-9000 ft. July-August 1906." G. Forrest. No. 4738.

Dr. Henry's plant, No. 9490, from Mengtze, alt. 6000 ft., certainly belongs to the same species as Mr. Forrest's. By the long leaf one is at first reminded of *C. longifolia*, Wall., but the flowers are very different.

Ceropegia Balfouriana, Schltr. Sp. nov.

Terrestris, humilis, c. 12 cm. alta; radicibus fasciculatis, crassis; caulibus paucis, simplicibus, flexuosis, laxe foliatis, basi denudatis, teretiusculis, minute puberulis; foliis erecto-patentibus, ellipticis vel elliptico-lanceolatis, acutis vel breviter acuminateis, superne et petiolo minute puberulis, subtus nervo medio excepto glabris, margine vulgo paulo undulatis, textura ut videtur crassiusculis, 0.9-2 cm. longis, medio vel infra medium 0.4-0.6 cm. latis; cymis subsessilibus paucifloris; pedicellis teretibus, sparsim puberulis, c. 1 cm. longis; calycis laciniis anguste lanceolatis, subulato-acuminatis, basi sparsim puberulis, c. 0.5 cm. longis; corolla c. 3 cm. longa, e basi subglobose-inflata, in tubum subcylindricum, c. 4.5 mm. diametentem fauce paululo dilatatum producta, extus glabra, lobis oblongo-ligulatis, intus carina puberula donatis, tubo aequilongis, c. 1.2 cm. longis; corona poculiformi, foliolis alte connatis in lobos 2 pilosulos triangulos, acutos productis, ligulis interioribus anguste linearibus, apicem versus paululo dilatatis, obtusis, glabris, plus duplo longioribus; polliniis oblique ovalibus, translatoribus medio-cribus, horizontalibus, retinaculo rhomboideo, polliniis fere 4-plo minore.

"Plant of 6 inches. Flowers purple and green. Rocky situations amongst scrub on the eastern flank of the Lichiang Range. Lat. 27° 10' N. Alt. 9500 ft. May 1906." G. Forrest. No. 2204.

This species has outwardly a certain resemblance with *C. nana*, Coll. et Hemsl., but has much shorter flowers, more elliptical leaves, and a very different corona. It is dedicated to Professor Balfour.